Risk Management Needs Assessment in Puerto Rico: Results from Online Focus Group

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Abstract

There are five main types of risks associated to the Agriculture Sector. In Puerto Rico's during the last four years have confronted productions risks due to natural disasters. Farmers and ranchers (F&R) in Puerto Rico have experienced decreases in farm income consistently since 2017 due to events such as the landfall of hurricanes Irma and María, earthquakes, and the Covid-19 pandemic. These events have made more valuable the business plan and develop emergency plans and strategies to be prepared so they can face future events. A focus group (FG) approach was used to interview F&R and fishermen to gain insight and feedback about their needs. Qualitative information was obtained from 24 participants in three FC groups. Participants agreed on three areas that need to be addressed to make Puerto Rico more resilient and risk prepared: legal framework that considers the realities of small and agroecological farms; a national agricultural plan centered on promoting food security and sovereignty; decentralization of food production and distribution. The project is planning an educational activity in the Summer 2021 to address these areas and propose operational strategies that will make food system more resilient in case of natural events.

Introduction

On September 2017 hurricanes Irma and María made landfall in Puerto Rico as a category 4 winds being the most catastrophic hurricane in decades. In January 2020 Puerto Rico experienced over 2,000 quakes, some over magnitude 5. After these natural events, F&R have seen the need for crop insurance, as well as to keep accounting records especially to submit claims to the USDA insurance and other assistance programs. The SRMEC approved a proposal to deliver education on accounting and financial management tools for F&R and Extension Agents that will help develop skills on having up-to-date accounting information, reduce financial risks and be prepared for future events. Two activities were proposed about Managing Financial Risk and Natural Disaster Preparedness, presenting topics suggested by participants in a FC discussion context. This poster summarizes the results obtained from the FG in which participants represented the diversity of Puerto Rico's agricultural producers and fishermen.

Methods

Participants and Recruitment: Attendees to AES small scale farmers trainings. **Considerations:** (1) first responders after Hurricane María; (2) different regions of the island; and (3) diversity in agricultural products and commodities. There were **24 participants in 3 focus groups:** (FG) including traditional farmers; fisheries/aquaponic producers; agroecologic farmers.
Procedures: **Interview guide**: 4 open-ended and 5 follow-up questions.
Interview questions: Recent experiences and potential efforts to increase food system resilience during and after a disaster.
Barriers identification: Public policy, food resilience and community capitals.
FGs conduction: Distance education technology by Zoom video conferences
Data Analysis: **Frequency analysis:** determine how many times a specific category was mentioned by any of the participants.[1]
Extension analysis: documents how many different people referred to the same category[1].
Intensity and Specificity, documents how important something is for, or how passionately, a participant speaks about a concept.[1]
Pareto curve analysis was performed to determine both levels of FG and participants' data saturation.[2-3] Ninety percent (93.7%) saturation was obtained at 18 out of 24 participants, and 90% data saturation was obtained at 2 out of 3 FGs.

Results

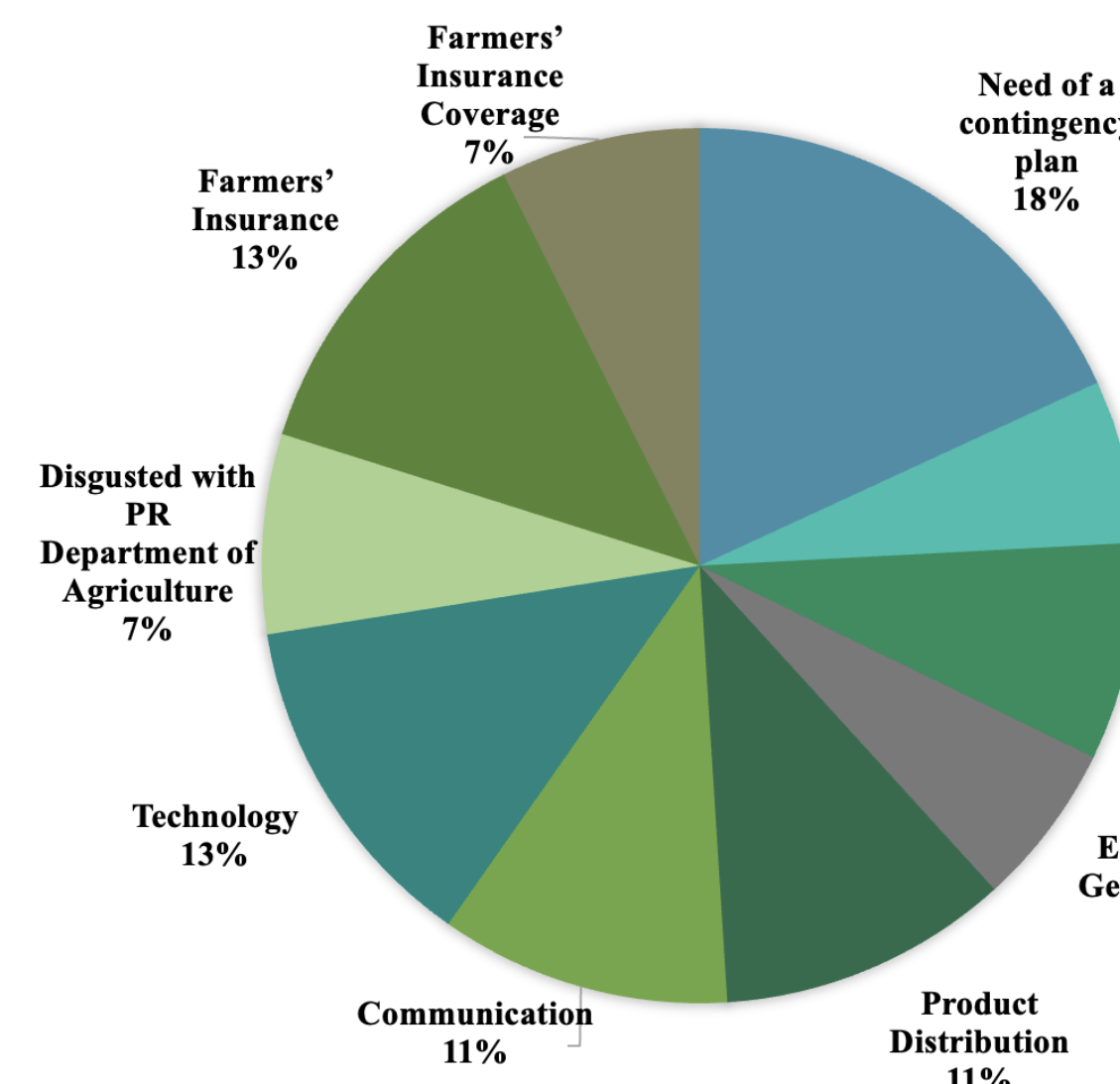Figure 1. Barriers to Resilience

Figure 2. Level of Data Saturation by FG

FGs indicated that the main barrier to recover and withstand adversity was the need to have a contingency plan with 18%, followed by farmers insurance and farmers insurance coverage with 20%, Figure 1. Results showed that technology, communication and product distribution with 13%, 11%, and 11% respectively.
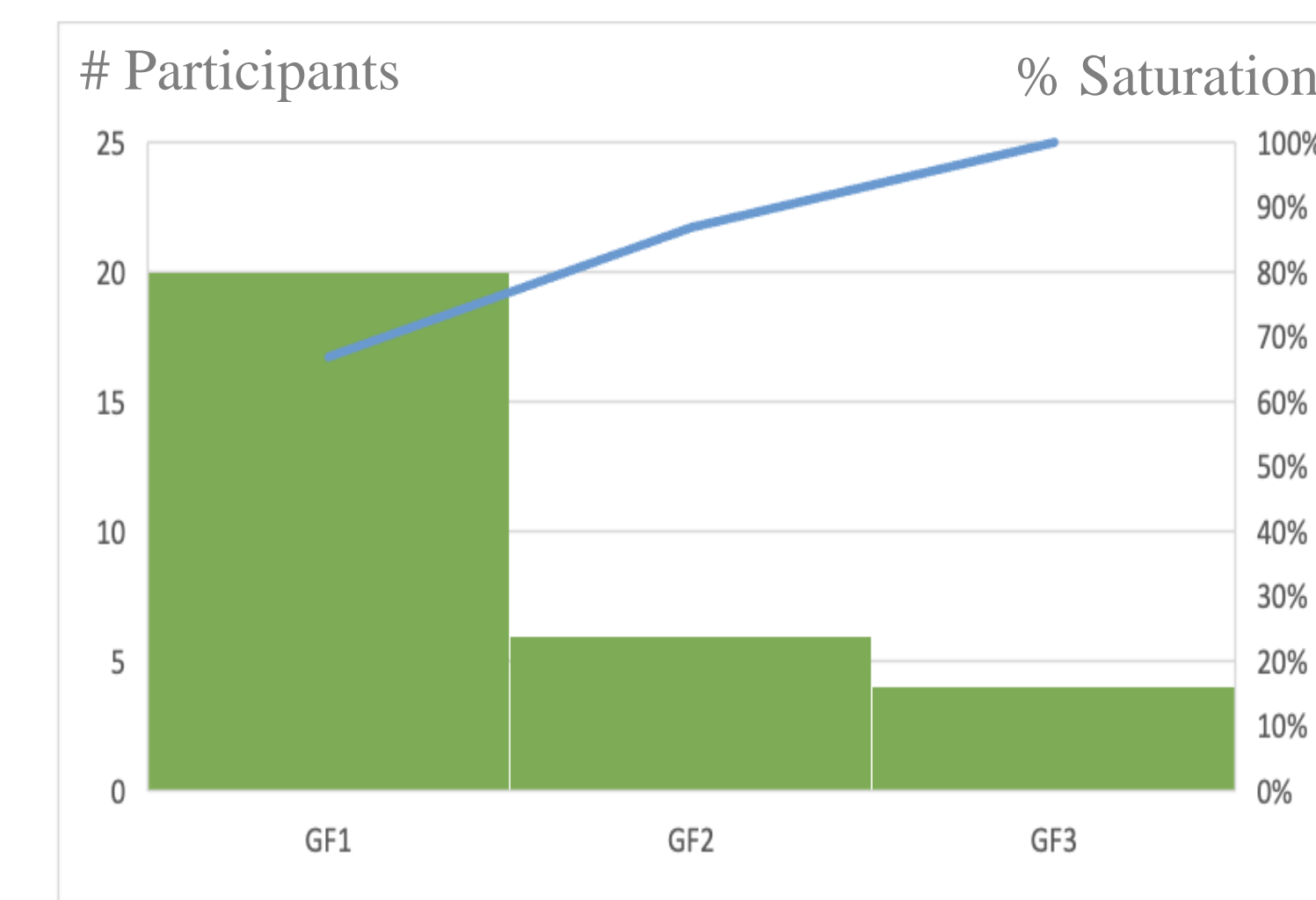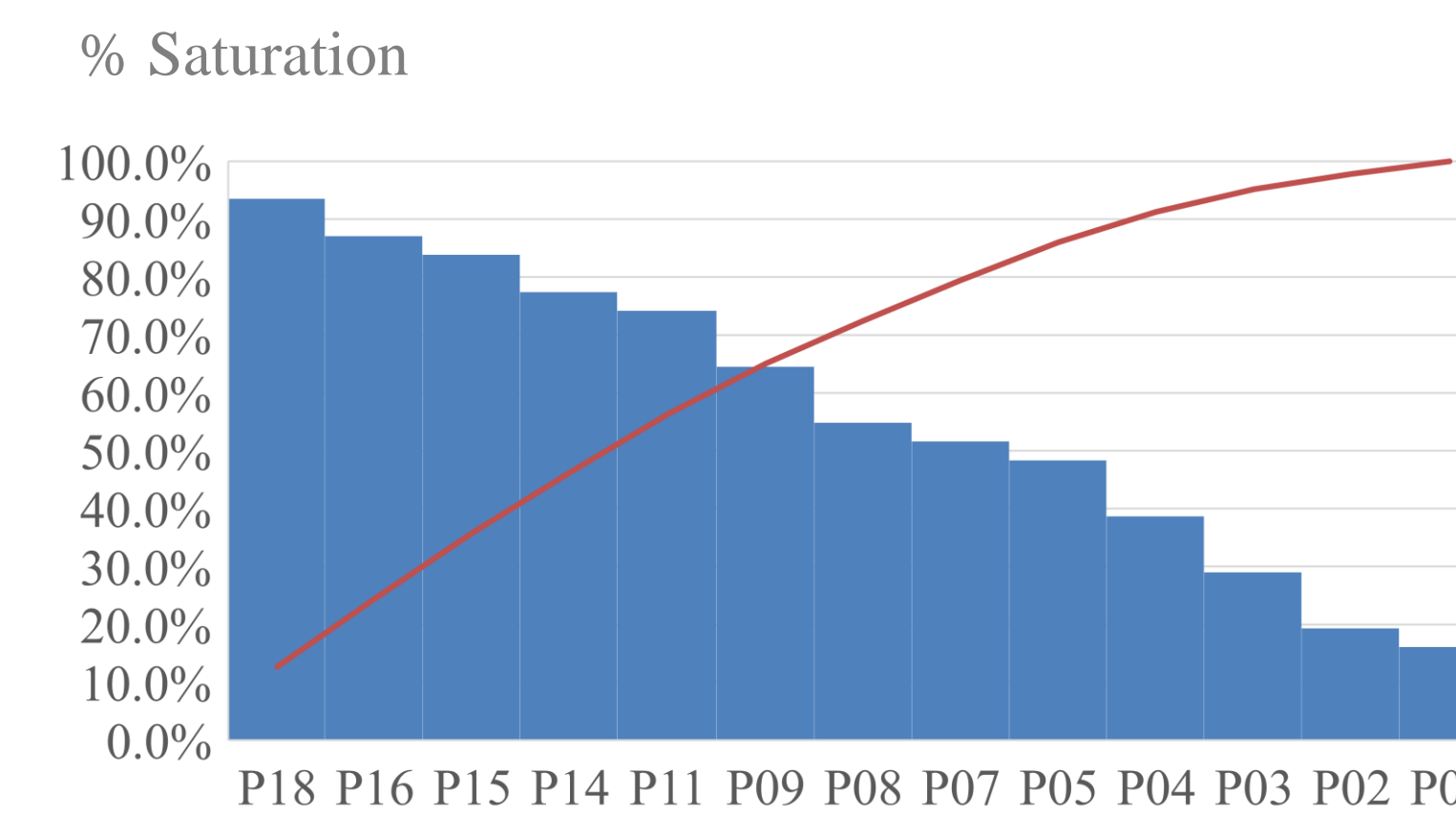

Figure 3. Participant Data Saturation

Intensity analysis:
- "Ironically, we live on a 100 by 35 [miles] island and when a natural disaster strikes it seems like we live on the largest continent in the world."
- "We take a course on whatever it is, how to vaccinate, how to sow, how to fumigate, but we don't take a course on how to prepare ourselves in place like Puerto Rico where one of these natural tragedies can happen every year."
- "I understand that labor is a very big factor [...] years ago there was a lot of workforce to pick coffee, today with the hurricane many people have left for the United States."
- "The one who takes [welfare] will not go to work at $7.25 to take bites from fire-ants."
- "After a disaster happens, you cannot go find [and fill] one thousand paper; you have to simplify the process so that the person [...] gets the help directly and then later look for the papers, because in the middle of an emergency it's [...] difficult."
- "As far as possible, we are trying to put solar panels. In our case, we spend 11 months without electricity."
- "The Agricultural Insurance Corporation did not arrive here because there was no access to the farm through the roads, so you couldn't count on them, there was no money."
- "One of the biggest problems is that when it comes to farm insurance, if it is not monoculture, they don't want to insure it for me."

Conclusions and Implications

Small Farmers agree on three main barriers:
- Need for a national agricultural and contingency plan that takes into account local producers.
- Need to reform aid programs to small farmers in time of crisis such as the emergency relief programs and farmer's insurance.
- The need to strengthen food production, access to technology, storage and distribution chains in order to create local integrated markets where the community can securely and easily access high quality healthy food directly from farmers during an emergency.
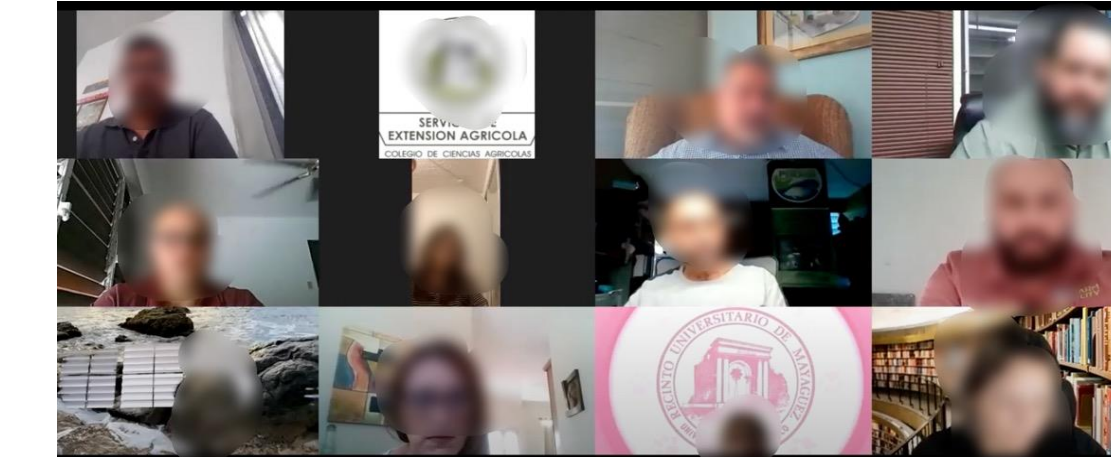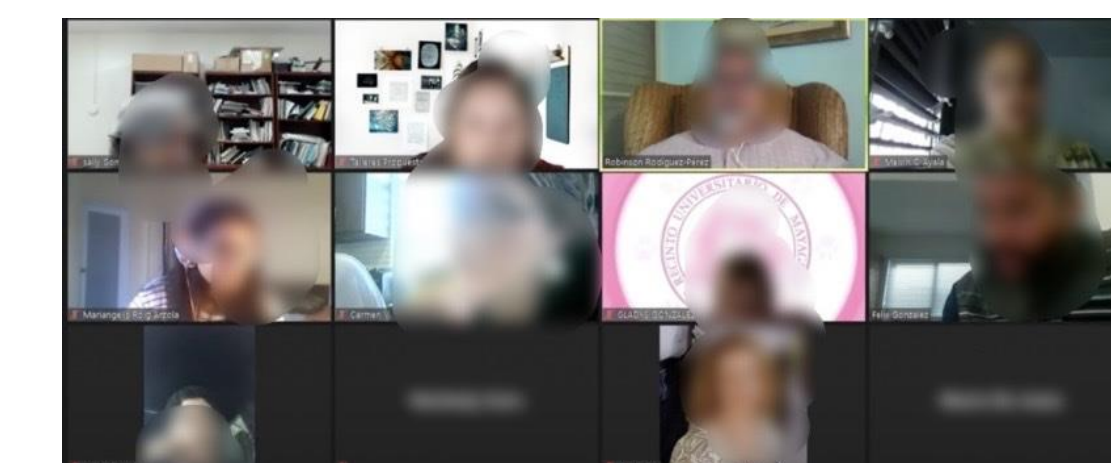
Acknowledgements

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